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ABSTRACT

Much of the criticism of higher education involves demands for greater efficiency. In certain areas, such critiques are valid; in others, they are misguided. Often the criteria and measurements used are misleading. In presenting the perspective of a large university, three erroneous means of increasing efficiency are highlighted, including: (1) the use of overly simplistic measures of efficiency; (2) short-run responses to each fluctuation in program enrollment; and (3) insistence on institutional or system-wide uniformity. Special considerations of the large university, in order to deal with efficiency, are the university budget, trying to achieve efficiency through increasing uniformity, the range in program and faculty quality, and the range in student quality. Areas to begin to improve efficiency and effectiveness include departmental reviews, central university monitoring of course and program proliferation, cost analysis and comparison among institutions, conversion of the institutional budgeting process into an effective management reporting system, resensitizing the system to rewarding improvement, tenure and retirement decisions, position control at the provost's level, annual enrollment forecasting down to departmental levels, training workshops for chairmen and assistant deans, good research and development in instructional improvement, reexamination of academic governance and grievance processes, the education of bureaucrats, the education of faculty groups, and bridging boundaries of disciplines. (MJM)

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# planning for higher education

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## The Threat of Efficiency

Much of the criticism of higher education at this time involves demands for greater efficiency. In certain areas, such critiques are valid; in others, they are misguided. Often the criteria and measurements used are misleading. The perspective of the large university on these questions is the subject of the text which follows. The original speech was delivered by John E. Cantlon, provost of Michigan State University, at the SCUP/ADAPT workshop, "More for Less: Academic Planning *With* Faculty *Without* New Dollars," held April 17-19, 1974 at the Nordic Hills Conference Center near Chicago. (The June, 1974 issue of *Planning* included two other addresses to the workshop, by Stephen K. Bailey and by David G. Brown.) The complete proceedings of the workshop will be published this fall as a cooperative venture of the Society and Educational Testing Service.

Efficiency need not be, and must not become, a threat to higher education. In an inflating economy with urgent, competing demands for public and private resources, higher education simply must be recognized as no longer (if indeed it ever did) occupying high budget priority. Post-secondary education must become more efficient. In the process, it can become more effective if we stop the hand wringing and settle down to work creatively toward legitimate educational objectives.

### Erroneous Means of Increasing Efficiency

Many well-intentioned but mindless actions, taken by or imposed upon an institution or a system of higher education in the name of efficiency, can constitute a threat—not only to quality, but to the long-range well-being of higher education itself. I will illustrate this with three broad categories.

1. **The use of overly simplistic measures of efficiency.** For example, the spurious measure of school classroom hours per full-time enrolled student: "Increasing SCH/FTE = increasing efficiency." We must remember that universities are complex structures and that their desired *outputs* are: (1) competently trained graduates of several levels, (2) substantial research and scholarly works, and (3) operationally effective extension activities, or transfers of information to where it can be put to work. If educational bureaucracies or legislatures continue to confuse input, output and process variables, we are in trouble. For example, we could become locked into some artificially selected SCH/FTE ratio, a process variable frequently confused as a measure of institutional output. We could thereby well miss the true output measures and create a climate in which faculty would resist all attempts to reduce student classroom hours by substituting other, possibly more effective, learning techniques.

In some instances, legislative committees or educational bureaucracies have selected some arbitrary number of faculty contact hours (again a process variable) and imposed this as a minimum faculty load. In one year, institutions in one state had their budgets reduced proportionately with the number of faculty in the prior fall term who were below an arbitrarily selected contact-hour level. Obviously, if continued, such actions would encourage universitites to break all large classes into small ones. It would discourage productive lecture or TV-moderated instruction as well as discourage an institution from permitting individual faculty members to operate on reduced contact hours while they reorganize their instructional programs for more efficient and effective instruction.

Another small-minded approach assumes that courses whose approved credit hours are larger than their actual contact hours somehow cheat the state and the student.

Such thinking, if permitted to determine funding policies, could seriously impede any real improvement in the instructional process—a process that remains at the "cottage industry" level of development and continually calls for real innovation. It could also impose a substantial economic disincentive to credit by examination and independent study.

**2. Short-run Responses to Each Fluctuation in Program Enrollment.** Measured responses require the examination of institutional objectives, state needs and long-term probabilities. The recent downturn in K-12 enrollments, coupled with large College of Education enrollments (which were stimulated by teacher shortages) created a temporary over-production of K-12 teachers. In the name of efficiency, there have been many demands that immediate enrollment adjustments be made. Many of us could foresee this overproduction and had instituted selective enrollment curbs well before entering students perceived the job market message. By the time students came to understand the job market, enrollment controls were no longer needed. However, care must be taken that we not overreact and trim our capacities. A critical mass must be preserved to keep quality programs viable and faculty resources; support must be flexibly responsive up and down around this solid core. Not all this flexible response needs to be vested in tenured faculty.

**3. Insistence on Institutional or System-Wide Uniformity.** This is probably as serious as the error of seizing upon simplistic efficiency indices and compounding the error by choosing a process rather than an output measure as the appropriate productivity index. Large single institutions (and I presume even more so in multi-campus state systems) are best operated when the subunits are able to capitalize upon their unique strengths and special opportunities while avoiding their special weaknesses and resistances.

Higher education represents a teaching-learning process that demands recognition of individual differences among students, faculty members, and disciplines as well as among locations, programs, traditions, etc. Hence, uniformity and effectiveness tend to be incompatible. Mindless insistence is especially tempting when it seems to permit optimization of one process in the institution by making it uniform throughout. Such temptations exist in personnel decisions, faculty work patterns, curriculum decision making, use of support staff, budgeting procedures, etc.

In my personally biased judgment, the new force of faculty collective bargaining appears to be accelerating movement toward uniformity, both by actions of management and the faculty representatives. We must recognize that scholarly and learning environments are not uniform among the myriad of units that make up universities and set about identifying which of these differences are very important to maintain.

This list of threats of efficiency, which are pursued with inadequate understanding of the highly personalized nature of the learning and research processes, could be expanded greatly. I will resist the temptation, however, and focus more specifically on the problems in pursuing efficiency at large institutions.

**Special Considerations of the Large University**

**1. The Very Large University Budget.** The very size of a large university's budget can make it a special target in legislative or executive budget cutting. Since so much of a university's budget is in faculty salaries (which we all recognize must be moved along in a sustained inflationary period), the areas that are especially vulnerable to underfunding are supplies and services, equipment, library and support facilities, and staff. When the enrollment boom was on, many older, large institutions managed to receive appropriations for faculty positions but additional funds lagged. Only the partial compensation of federal programs held back disaster. Now that institutions have stopped growing and federal programs have been curtailed, inflation prevents even a standstill, let alone a catch up, in these areas. As obsolescence overtakes instructional and research equipment, this area (as compared with a "pre-boom" norm) could easily become a national disgrace.

**2. Trying to achieve efficiency through increasing uniformity.** In a large and complex institution, this is a virtual impossibility. The Medical School and the Math Department differ in faculty working hours, salaries, outside pressures on faculty or departments, differences in faculty evaluations, legal liability, state legislative interest, and federal support. What might be a welcome and effective target for improving efficiency in one area is often unworkable (even if acceptable) in another unit.

**3. An element in non-uniformity: the range in program and faculty quality.** Most university administrators would rather "streak" a public symposium than admit that disparate faculty quality is a mjaor problem in improving both efficiency and effectiveness. The truth of the matter is that whole units in a large university can be characterized as predominantly outstanding or poor. The quality of units can become positively correlated with efficiency and effectiveness if these objectives are clearly identified as not being as the expense of quality.

Those administrators among us who have spent a couple of decades in the classroom before going into administration are aware of the large number of

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inefficient processes and conditions connected with higher education. Among these are redundancy in curricula, non-essential prerequisites, excessive time spent by graduate students in getting advanced degrees, inadequate coordination among courses, poor classroom scheduling, too little attention given to preparing teaching assistants and new faculty, and too little training for chairmen and administrative assistants.

Good units working through faculty participation and imaginative, management-minded chairmen tend to make improvements with no perception of the process being threatening, provided at least part of the savings thereby made reverts to the units for meeting new challenges. Poor and often insecure faculties are less eager and more wary of change. In these situations, each proposal is examined for its potential impact on reducing faculty, or support staff or changing working schedules. In my experience, time spent in departmental academic governance processes and grievance procedures seems to be negatively correlated with faculty quality. Self-assured, productive and motivated faculty tend to organize each meeting to maximize its effectiveness and efficiency so they can go on to the main business of their discipline or school.

4. **The large range in student quality.** The disparity between disadvantaged students, some intercollegiate athletes, and two-year agricultural technology students at one extreme, and National Merit Semi-finalists and graduate students at the other extreme, conveys the range. Furthermore, student talent is neither randomly nor evenly distributed among disciplines. Any uniform approach to efficiency and effectiveness must accommodate the differing capacities of students as well as the differing capabilities and motivations of the various faculties within the university.

**Fourteen Places to Begin at the Large University**

I'll list some actions we've tried at Michigan State University to improve our efficiency and effectiveness.

- **Departmental Reviews** — one of the *most* effective.

*Internal Resource Studies* as the central administration, college deans, departmental chairmen and faculty representatives study together the institutional goals and unit goals, resources available, possible outputs, rank ordering of outputs, and then negotiate out those changes that can be agreed to. Both during growth periods and in the present retrenchment conditions, I recommend this approach as the most rewarding for the amount of effort, but the demand on administrative time is great and the quality of staff required is high. Most of the data for such a study must be generated by central administration and reacted to by the unit.

*External Reviews* are more effective for evaluating special items. They work best with academically strong departments, where faculty are secure in their reputations and not cowed by tough external reviewers. The departmental faculty should not choose the majority of the external reviewers. Letters of appointment to the reviewing representatives must convey that it is a college or central administration review. We have had modest success with this approach, although it can result in arguments for more funding without concommitant unit improvements.

- **Central university monitoring of course and program proliferation or perpetuation.** Such features as the following are essential to maintain fiscally responsible programs:

*Minimum enrollment floors* for sections and courses—with special provisions for approving occasional exceptions.

*Tough curriculum committee review* rather than the log rolling tendencies which can plague such operations.

*Tough administrative review* of all new programs; at each annual budget cycle, tough questions must be asked about continuation of programs that have low productivity.

- **Cost analysis and comparison among institutions.** In our situation, we find useful data exchanges in several comparison groups: the Michigan Council of State College Presidents; special Medical School reviews; the Big 10 Committee on Institutional Cooperation. Evaluation of faculty salary levels, tenure ratios, unit costs of instruction, and related matters helps to locate potential soft spots.

- **Conversion of the institutional budgeting processes into an effective management reporting system.** We formerly had three processes which have now been combined into one. These three processes were preparation of departmental annual reports, preparation of asking budgets, and agreement on allocative or operative budget for each unit. This system focuses on the outputs of each unit in terms of both quantity and quality. Such outputs include: instruction, research, extension, advising, administration, and public service.

From central administration, we also give each unit a set of data on its inputs of funds, faculty, staff, and other resources, as well as data on average class size, ratios of graduate students to undergrads, and comparisons of that unit with average college and institutional input/output ratios.

- **Resensitize the reward system to actually reward improvement.** Salaries and promotions for faculty still tend to be strongly traditional, even archaic. They focus largely on quantitative scholarly output and intuitive quality judgments. We need to address this matter with greater sophistication. By careful evaluation of overall departmental quality and comparison of its salary structure with similar departments in other institutions, some sense of rewarding of quality can be achieved. A pledge can be made to share dollars saved with units that make tough decisions.

- **Tenure and retirement decisions.** Tenure reviews and tenure ratios are sources of concern in unit management. Central administration can encourage

shifting of empty positions to visiting professors and approving hiring in lower ranks only. Early retirement on an individual basis with institutional initiative is useful. We have found that a comparison of salary amounts budgeted for tenure stream versus allocations for visiting professors, temporary and teaching assistants is a good general way to look at faculty manpower.

- **Position control at the provost's level.** All vacancies except those created by the unit's own decision not to recommend reappointment should revert to the dean for recommendation and to central administration for final decision.

- **Annual enrollment forecasting down to departmental levels.** This is essential for anticipation of enrollment shifts. MSU has a central university undergraduate admission. (Departments have an input in admissions in a few departments like Music and Nursing.) At present, there is a 1,500 net enrollment shift per year with Colleges of Social Science, Arts and Letters and Education decreasing, and Natural Science, Human Ecology, Agriculture and Business increasing by the same number. This poses a tough problem on transfer of resources.

- **Training workshops for chairmen and assistant deans.** Rapidly changing federal practices and internal changes in management procedures require setting up workshops of various sorts. This needs more attention than we have given previously.

- **Good research and development in instructional improvement.** This area has a potential payoff both in increasing productivity and in improving instructional quality. However, it requires very good supervision. At MSU, ITV, IMC, Learning Service, and Evaluation Services have been consolidated into one combined operation.

- **Reexamination of academic governance and grievance processes.** These and other departmental, college, and university level meetings consume valuable time with, at best, marginal outputs and accompanying feelings of faculty frustration. Change in these units must have strong faculty participation, but administrators must also be involved from president down through the vice presidents, deans, and department chairmen.

- **The education of bureaucrats, legislators, board of trustees and general public.** Publicizing information concerning the complexity of universities must be a matter of continued attention, but this must be accompanied with solid evidence of progress by the university that it is meeting public needs and is improving institutional effectiveness. In Michigan, the general public is getting a very good bargain in higher education. In spite of substantial escalation of sophistication in faculty and in what must be taught, fewer non-inflated dollars were spent per enrolled student in higher education in 1973-74 than 1957 in all except medical colleges. Such information should be widely disseminated.

- **The education of faculty groups.** Faculty members sometimes perceive administrative concern for improved efficiency as a potential assault upon educational quality, if not academic freedom. I have long since ceased worrying that administrators are seen as *the problem* by a small part of the faculty. This is inevitable and not much can be done about it. However, chairmen, deans, and central administration must not as a result ignore genuine faculty concerns.

- **Bridging boundaries of disciplines.** Rigid categories, when strictly adhered to, may be hurdles to improving academic program quality and efficiency. This is a major task that calls for much attention. Positive first steps include increasing the number of joint appointments, having certain departments reporting to two or more colleges, and allowing or encouraging rotation among departments of faculty members. Some central administrative unit should address this challenge as a continuing part of its mission. These actions generate other kinds of problems, such as more complex bookkeeping, but the tradeoff is worth it.

I believe that universities, both large and small, continue to address new challenges. Our nation has a voracious appetite for competently trained and enlightened graduates, for new research and creative scholarship, and for learning how to bring insight from the ivy covered halls out into the world where it can be put to work. With the growing challenges facing this nation and the entire human race, higher education has never had so much reason to be optimistic. However, higher education is supported by the public not as a holding pattern of the affluent elite: it is supported to deliver essential services. Universities are not societal luxuries in today's complex world. We, or something very much like us, will become even more essential to the continuation of man's culture. However, our culture insists that we take this challenge seriously; that we alleviate waste, trivial puttering around, and territorial defense among units. Then we can get on with the job both society and we know we can and must do.

*John E. Cantlon*